

**Remarks**

This REPLY is in response to the Office Action mailed November 13, 2008, and an interview with Examiner Barbara Burgess on April 29, 2009. A Petition for Extension of Time is enclosed herewith, together with the appropriate fee.

**I. Applicant's Interview Summary**

Applicant thanks Examiner Barbara Burgess for the courtesy of an interview with Karl Kenna on April 29, 2009, during the course of which interview the participants generally discussed the pending claims and the cited references. No claim amendments were proposed during the interview, and no agreement was reached between the parties.

**II. Summary of Examiner's Rejections**

Prior to the Office Action mailed November 13, 2008, Claims 1-15, 17, 24-27, 29-60, 63 and 64 were pending in the Application. In the Office Action, Claims 52-53 were rejected 35 U.S.C. 102(e) as being anticipated by Yano et al. (U.S. Patent Publication No. 2006/0184546, hereinafter Yano). Claims 1-15, 17, 29-51 and 54-60 were rejected under 35 U.S.C. 103(a) as being unpatentable over Yano in view of Hailpern et al. (U.S. Patent No. 7,383,299, hereinafter Hailpern) and further in view of Chua et al. (U.S. Patent Publication No. 2002/0049756, hereinafter Chua). Claims 24-27 and 63-64 were rejected under 35 U.S.C. 103(a) as being unpatentable over Yano in view of Hailpern, further in view of Chua, and further in view of Vora et al. (U.S. Patent No. 6,539,379, hereinafter Vora).

**III. Claim Rejections under 35 U.S.C. 102(e)**

In the Office Action mailed November 13, 2008, Claims 52-53 were rejected 35 U.S.C. 102(e) as being anticipated by Yano (U.S. Patent Publication No. 2006/0184546).

Applicant respectfully traverses the rejection of Claims 52 and 53 for at least the reasons provided below. As currently presented, Claims 52 and 53 recite a communication protocol that provides a session connection between a client and the server, and allows the client to send, as part of the same session, a plurality of queries to query the server for content. Each of the plurality of queries are consecutive and form an increasingly focused query string for retrieving content from the server. Each subsequent one of the plurality of queries extends the query string by one or more

additional characters. The server simultaneously applies the increasingly focused query string against a plurality of databases or data sources as it is being extended, and suggests a set of increasingly appropriate content or search criteria from the plurality of databases, to the client, for further use by the client within the same session.

Yano apparently discloses a document information management system in which a search-engine-compatible interface unit makes a word in a document displayed on the screen to be specified, transfers the specified word to a search engine as a keyword to be used in the search engine, receives a search result from the search engine, and displays the search result on the screen, while a browser-compatible interface unit performs a search (a keyword search and/or global search) by using the keyword transferred from a browser and transfers a search result to the browser. (Abstract). As disclosed by way of example therein, the browser 102 displays a document on the screen (S701). When a character is identified (specified), the search-engine-compatible interface unit 104 cuts out a character string obtained by adding some characters before and after the character thereto (adjacent character string) (S703), compares the cut-out character string to the word table (S704), cuts out the character string coincident with any word in the word table as a word, and identifies the word (S705). (Paragraphs [0075]-[0085]).

Applicant respectfully submits that, based on the above description, in Yano, the query preparation steps appear to be performed *at the browser*, and particularly at the search-engine-compatible interface unit of the browser. The character string that is obtained by adding one character before the specified character, and the comparison that is made as to whether there is any word coinciding with this temporary word is performed by searching a word table, also apparently at the browser. When it is determined that there is a coinciding word in the word table, the temporary word is identified as a word, and when the cut-out character string is coincident with any word in the word table, the identified word is recognized as a keyword. Only at that point is the keyword apparently transferred from the browser to the search engine.

As such, Applicant respectfully submits that Yano does not appear to disclose or suggest a keyword being sent to the search engine as a plurality of consecutive queries, or even as a plurality of queries; nor does Yano appear to disclose or suggest sending portions of a word to a remote search engine or server.

As such, Applicant respectfully submits that Yano does not disclose or render obvious that *the client sends, as part of the same session, a plurality of queries to query the server for content*,

*wherein each of the plurality of queries are consecutive and form an increasingly focused query string for retrieving content from the server, and wherein each subsequent one of the plurality of queries extends the query string by one or more additional characters; and wherein said server simultaneously applies the increasingly focused query string against the plurality of databases or data sources as it is being extended, and suggests a set of increasingly appropriate content or search criteria from the plurality of databases, to the client, for further use by the client within the same session, as recited by Claims 52 and 53, as currently presented.*

In view of the above comments, Applicant respectfully submits that Claims 52 are 53, as currently presented, are neither anticipated by, nor obvious in view of the cited references, when considered alone or in combination. Reconsideration thereof is respectfully requested.

#### **IV. Claim Rejections under 35 U.S.C. 103(a)**

In the Office Action mailed November 13, 2008, Claims 1-15, 17, 29-51, 54-60 were rejected under 35 U.S.C. 103(a) as being unpatentable over Yano (U.S. Patent Publication No. 2006/0184546) in view of Hailpern (U.S. Patent No. 7,383,299) and in further view of Chua (U.S. Patent Publication No. 2002/0049756). Claims 24-27 and 63-64 were rejected under 35 U.S.C. 103(a) as being unpatentable over Yano in view of Hailpern, further in view of Chua, and further in view of Vora (U.S. Patent No. 6,539,379).

##### **Claim 1**

Applicant respectfully traverses the rejection of Claim 1 for at least the reasons provided below. As currently presented, Claim 1 recites a communication protocol that enables an asynchronous connection over a network between a client system and a server system, and allows the client system to send via the network, and within a session between the client system and the server system, a lengthening string composed of a plurality of consecutively input characters, to query the server system for string-based content, while receiving an asynchronous response from the server as the characters are being input; a client object, in communication with a client software at the client system and with the communication protocol, wherein the client object receives additional characters from the client software, and as consecutive characters are being received, transmits via the network to a server object at the server system a plurality of consecutive queries, within the session between the client system and the server system, to retrieve content from the

server system, wherein each consecutive query lengthens the string by the additional characters, to form a lengthening string for retrieving matching content from the server system; and a server object, in communication with the server system, and with the client object via the communication protocol, wherein the server object in response to receiving the consecutive queries that form the lengthening string, automatically uses the lengthening string to query and retrieve content information from the server system that matches the lengthening string, and wherein the server object asynchronously returns, while the additional characters are being input and the string is being lengthened during the session, consecutive responses containing increasingly matching content information to the client object for immediate use by the client system.

As described above, in Yano, the query preparation steps appear to be performed at the browser, and only then is the keyword transferred from the browser to the search engine. Yano does not appear to describe a keyword being sent from the browser to the search engine as a plurality of consecutive queries, or even as a plurality of queries.

As such, Applicant respectfully submits that Yano does not appear to disclose or render obvious several features of Claim 1, including for example that the client object receives additional characters from the client software, and *as consecutive characters are being received, transmits via the network to a server object at the server system a plurality of consecutive queries*, within the session between the client system and the server system, to retrieve content from the server system, *wherein each consecutive query lengthens the string by the additional characters*, to form a lengthening string for retrieving matching content from the server system; and that the server object automatically uses the lengthening string to query and retrieve content information from the server system, and asynchronously returns, *while the additional characters are being input*, consecutive responses containing increasingly matching content information to the client.

Hailpern apparently discloses a method for searching for a partially specified Uniform Resource Locator (URL) address includes receiving a user request, from a user, including a partially specified URL address. A URL search request handler is invoked to search for the partially specified URL address within an inverted index of web site URLs. A web search request handler is invoked to rank the search results of the search for the partially specified URL address based on one or more keywords specified in the user request, a list of recently accessed URLs, and a user profile. (Abstract).

Chua apparently discloses a system and method for searching multiple disparate search engines. More particularly, a search system provides a search engine manager that operates to provide a standard interface with which one or more search engines may be queried through a search client. (Abstract). As disclosed therein, one limitation common to search engines is that they are only able to search a single source. Search engines associated with a computer program may search a database associated with the help module, generally without searching any other source. To search other sources, a user has to launch another search engine to perform the search. (Paragraph [0003]). The [system disclosed therein] overcomes the problems identified above by providing a common interface with which one or more search engines may be queried through a common search client, and which allows various search engines to easily register with the common search client. (Paragraph [0006]). In one example, when a client executes a query, the search engine manager calls each wrapper registered to handle queries for participating search engines. The wrappers may be called to execute their respective searches asynchronously in parallel. Optionally, the client may enable or disable particular registered search engines. The search results of each search engine may be returned as the searches are completed. (Paragraph [0008]).

In the Office Action, it was apparently acknowledged that Yano in view of Hailpern does not explicitly disclose a communication protocol that enables an asynchronous session based connection between a client system and a server system; asynchronously returns increasingly relevant content information to the client object for immediate use by the client system; and asynchronously receiving consecutive responses from the server as the characters are being input.

However, it was asserted that one of ordinary skill in the art would have found it obvious to implement or incorporate Hailpern's session between the client and server systems in Yano in order to return to the user a list of URL addresses based on the search for the partially specified URL address; that the use and advantage of asynchronously receiving consecutive responses is well-known to one of ordinary skill in the art as evidenced by Chua; and that one of ordinary skill in the art would have found it obvious to incorporate or implement Chua's asynchronously returning responses in Yano's system providing the client with search results.

Applicant respectfully traverses the foregoing assertion. As currently presented, Claim 1 recites a communication protocol that enables an asynchronous connection over a *network between a client system and a server system*, and allows the client system to send via the network,

and within a session between the client system and the server system, a lengthening string composed of a plurality of consecutively input characters, to query the server system for string-based content, *while asynchronously receiving consecutive responses from the server* as the characters are being input. Applicant respectfully submits that none of the cited references appears to disclose such a communication protocol that enables an asynchronous connection over a network between a client system and a server system.

Furthermore, as currently presented, Claim 1 recites a client object, in communication with a client software at the client system and with the communication protocol, wherein the client object receives additional characters from the client software, and as consecutive characters are being received, transmits via the network to a server object at the server system a plurality of consecutive queries; and a server object that in response to receiving the consecutive queries that form the lengthening string, automatically uses the lengthening string to query and retrieve content information from the server system that matches the lengthening string, and wherein the server object asynchronously returns, while the additional characters are being input and the string is being lengthened during the session, consecutive responses containing increasingly matching content information to the client object for immediate use by the client system.

As disclosed by Chua, the search system described therein appears to allow for easier addition of search engines, wherein each search engine registers with the search system through a wrapper, and wherein the wrapper provides communication between a search engine manager and the search engine. In Chua, when a query is initiated by a client, the query is apparently transmitted in series from the search engine manager to each of the several search engines, at which point the search engines can process the query in parallel with one another. The results from the search engines are not returned asynchronously to the client, but are instead returned to the search engine manager. As such, the client and the search engine manager do not appear to communicate or exchange results asynchronously; and particularly do not communicate asynchronously as new queries are being input at the client. Figures 5 and 6 of Chua also appear to confirm that the search client is not involved in the asynchronous receiving of results from the several search engines. Rather, it appears that only after a complete query is received from the client (e.g. step 530) is the query sent to each registered search engine; and only after all results are received at the search engine manager (e.g. step 660) are the results communicated back to the client.

As such, Applicant respectfully submits that neither Yano, Hailpern, nor Chua appear to describe *an asynchronous session based connection between a client system and a server system, or that the client can asynchronously receive consecutive responses from the server as the characters are being input*, as recited by Claim 1.

In view of the above comments, Applicant respectfully submits that Claim 1, as currently presented, is neither anticipated by, nor obvious in view of the cited references, when considered alone or in combination. Reconsideration thereof is respectfully requested.

#### **Claims 24, 29, 32 and 33**

For similar reasons as provided above with respect to Claim 1, Applicant respectfully submits that Claims 24, 29, 32 and 33 are likewise neither anticipated by, nor obvious in view of the cited references.

Additionally, Claim 24 further recites a status indicator, said status indicator displayed within the first or a second portion of the input field, for indicating during said session both the status of increasingly available content at said content server for selection by said user at that input field, and that the server object is currently using the lengthening query string against the content of the server system to query and retrieve content information from the server system.

Additionally, Claim 32 further recites one or more content engine objects, in communication with the server object, that are capable of retrieving information from a content source containing string-based data by using a lengthening string as part of a content query and by returning matching data from the content source, and wherein the content information is used by the client to immediately update the user interface with options that match the content of the server system, as the user is entering the search string.

Additionally, Claim 33 further recites that the content information is used by the client to immediately update the user interface with options that match the content of the server system, as the user is entering the search string.

Additionally, Claim 36 further recites that as the user of a particular client is entering queries, the server object asynchronously modifies the user interface by returning increasingly relevant server content information to the client object for immediate display to the user

Additionally, Claim 37 further recites that, in response to receiving each query as it is being lengthened by the one or more additional characters, the lengthening query string is automatically

matched against the content of the server, and the user interface is asynchronously modified by returning increasingly relevant server content information to the client object.

Additionally, Claim 54 further recites that the client object is linked to an input element in a user interface that allows a user to enter textual information to create incremental user input comprising a mutating string of characters; and that user input is transmitted by the client object to the server object while said user input is being formed; and that the server object uses said user input received from the client object to query data from one or more content sources, and return result strings matching said user input asynchronously from said server computer while the input is being formed.

Applicant respectfully submits that the above features similarly do not appear to be disclosed by, or obvious in view of the cited references, when considered alone or in combination. Reconsideration thereof is respectfully requested.

#### **Claims 36-37 and 54**

In the Office Action mailed November 13, 2008, in rejecting Claims 36, 37 and 54, it was apparently acknowledged that Yano does not explicitly disclose a communication protocol that enables an asynchronous connection between a client system and a server system; or asynchronously returns increasingly relevant content information to the client object for immediate use by the client system. However, it was asserted that Gersh (at column 48, lines 14-17, 40-53) teaches users transmitting queries to a web server to find information from various Web suppliers, in which asynchronous messaging is provided between the client (user) and server (Web server).

Since the Office Action also indicates that Claims 36, 37 and 54 were rejected under 35 U.S.C. 103(a) as being unpatentable over Yano in view of Hailpern and in further view of Chua, the above rejection (to Gersh) may be a typographical error. Applicant welcomes the Examiner's assistance in providing further clarification of this particular rejection.

Notwithstanding the above, for similar reasons as provided above with respect to Claim 1, Applicant respectfully submits that Claims 36, 37 and 54 are likewise neither anticipated by, nor obvious in view of the cited references, when considered alone or in combination. Reconsideration thereof is respectfully requested.

#### **Claims 2-15, 17, 25-27, 30-31, 34-35, 38-51 and 55-60**

Claims 2-15, 17, 25-27, 30-31, 34-35, 38-51 and 55-60 depend from and include all of the features of one of Claims 1, 24, 29, 32, 33, 36, 37, 52, 53 or 54. Applicant respectfully submits that each of these claims are allowable at least as depending from an allowable independent claim, and further in view of the comments provided above.

Applicant further respectfully submits that many of the above claims include features and limitations that may render the claims patentable in their own right, as further described in Applicant's previous Reply mailed August 20, 2008, which is also incorporated herein by reference. Applicant respectfully reserves the right to further argue these features and limitations as may be appropriate.

**V. Conclusion**

In view of the above remarks, it is respectfully submitted that all of the claims now pending in the subject patent application should be allowable. Reconsideration thereof is respectfully requested. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting issuance of a patent.

Enclosed is a PETITION FOR EXTENSION OF TIME UNDER 37 C.F.R. §1.136 for extending the time to respond up to and including May 13, 2009.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 06-1325 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

Date: May 13, 2009

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